

NOTE ON THE RELATIONSHIPS OF *PINUS MERKUSII*

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IN HIS *Genus Pinus* (Publication No. 5 of the Arnold Arboretum, 1914), George Russell Shaw with some hesitation placed *Pinus merkusii* Jungh. & De Vriese in the group Lariciones. Shaw wrote, "Of the habit of this pine I know nothing. . . . In my specimens the pits of the ray-cells of the wood are both large [as in the group Lariciones] and small [as in the group Insignes]. In this particular it may belong in either of two groups of species. Its uniform leaf-hypoderm associates it with this group [Lariciones] or with *P. halepensis* of the Insignes. I have assumed the cone to be dehiscent at maturity and have placed it with the Lariciones, but if further information shows the cone to be serotinous, this species should be transferred to the serotinous group [of the Insignes]."

In February, 1961, I had occasion to observe *Pinus merkusii* in the field in Thailand, Indonesia, and the Philippines. I noticed that normally *P. merkusii* cones dehisce on maturity, shed their shiny ochre-yellow seeds, and remain open and attached to the trees. I could not help but admire Mr. Shaw's wisdom, his sound judgment, and intuition that caused him to place *P. merkusii* in the group Lariciones. Perhaps it is true that in certain characters, such as the uniform leaf-epidermis, *P. merkusii* resembles some pines of the Insignes group, but I think this pine has much more in common with the species of the group Lariciones.

The geographical distribution of the Insignes and the Lariciones pines is shown below:

REGION	PINES OF GROUP	PINES OF GROUP
	INSIGNES	LARICIONES
Mexico	4	None
W. America	4 or 5	None
E. America	6	2
Europe	3 (incl. <i>P. brutia</i>)	3 (incl. <i>P. sylvestris</i>)
SE. Asia	None	7

It is seen from the above tabulation that the Lariciones pines are predominantly species of southeastern Asia (from Japan to Sumatra). On the other hand, the Insignes pines are not found there. Therefore, the occurrence of *Pinus merkusii* in southeastern Asia, where most of the Lariciones pines grow, seems to me to be one more point in favor of placing this southernmost pine in the group where Shaw placed it.

The Insignes are a rather heterogeneous group, perhaps the first one of the genus *Pinus* to be revised in the light of its genetic characteristics. But such a revision would chiefly concern pines of the eastern United States and would not affect pines of southeastern Asia. All pines of that part of the world most likely will remain in Shaw's group Lariciones.

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